

bridges, is usually limited by obsolescence as well as structural deficiency and deterioration. Obsolescence may be due to insufficient capacity for heavier loads and greater volume of traffic than the bridge was originally designed for, safety requirements, and location. Superstructures and pile bents are considered to have a service life of 50 years. Masonry substructure which could be reused in the renovation of a bridge is considered to have a service life of 100 years.

(4) The foregoing service life figures are not to be used arbitrarily, but as a basis for a fair judgment of the service life considering all other factors that pertain in any particular case.

APPENDIX A TO PART 277—SEC. 6, PUB. L. 647, AS AMENDED (33 U.S.C. 516)

At the time the Secretary* shall authorize the bridge owner to proceed with the project, as provided in Section 515 of this title, and after an opportunity to the bridge owner to be heard thereon, the Secretary shall determine and issue an order specifying the proportionate shares of the total cost of the project to be borne by the United States and by the bridge owner. Such apportionment shall be made on the following basis: The bridge owner shall bear such part of the cost as is attributable to the direct and special benefits which will accrue to the bridge owner as a result of the alteration, including the expectable savings in repair or maintenance costs; and that part of the cost attributable to the requirements of traffic by railroad or highway, or both, including any expenditure for increased carrying capacity of the bridge, and including such proportion of the actual capital cost of the old bridge or of such part of the old bridge as may be altered or changed or rebuilt, as the used service life of the whole or a part, as the case may be, bears to the total estimated service life of the whole or such part. Provided, that in the event the alteration or relocation of any bridge may be desirable for the reason that the bridge unreasonably obstructs navigation, but also for some other reason, the Secretary may require equitable contribution from any interested person, firm, association, corporation, municipality, county, or State desiring such alteration or relocation for such other reason, as a condition precedent to the making of an order for such alteration or relocation. The United States shall bear the balance of the costs, including that part attributable to the necessities of navigation: and provided further, that where

the bridge owner proceeds with the alteration on a successive partial bid basis the Secretary is authorized to issue an order of apportionment of cost for the entire alteration based on the accepted bid for the first part of the alteration and an estimate of cost for the remainder of the work. The Secretary is authorized to revise the order of apportionment of cost, to the extent he deems reasonable and proper to meet any changed conditions.

(June 21, 1940, ch. 409, Section 6, 54 Stat. 499; July 16, 1952, ch. 889, Section 2, 66 Stat. 733; Aug. 14, 1958, Public Law 85-640, Section 1(c), 72 Stat. 595.)

APPENDIX B TO PART 277—HYPOTHETICAL EXAMPLE OF COST APPORTIONMENT

Following is the interpretation of the principles as applied to the alteration of a hypothetical highway—railroad bridge across Blank River between City A and City B.

	Reference table
1. Total estimated cost of alteration project.	\$10,917,300 A
The existing double deck swing span will be replaced with a new double deck lift span affording a horizontal navigation opening of 250 feet clear width between piers normal to the navigation channel and a vertical clearance of 125 feet above mean high water in the raised position.	
2. Salvage	\$77,300
This value is deducted from the original cost to determine the actual capital cost (Table VII). It is also deducted from the Total Estimated Cost of Alteration Project to determine the cost to be apportioned.	
3. Direct and special benefits:	
a. Removing old bridge (owner's share).	\$165,489 I
b. Fixed charges (owner's share).	284,460 II
A fixed charge such as engineering, design and inspection costs, realtor's and counsel's fees, and bridge owner's administrative expenses is an undistributed cost shared in the ratio that each party shares the cost of construction less fixed charges. In computing the bridge owner's share of the fixed charges, all other financial liabilities assigned to the bridge owner shall be included in the computation. (Table II).	
c. Contribution by third party ..	\$432,000

Section 6 of the Act provides that in the event the alteration or relocation of any bridge may be desirable for the reason that the bridge unreasonably obstructs navigation, but also for some other reason, the Secretary may require equitable contribution

*Secretary of Transportation.